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ABSTRACT

In the debate on instructional objectives, some argue for reducing all objectives to statements of student terminal behaviors, while others want open-minded objectives which allow for diverse, unpredictable outcomes. A synthesis of seemingly incompatible behavioral specification and open-endedness is proposed: (1) Behavioral objectives need not deal only with end-products of instruction; they can also focus on by-products and processes of a student's task and thus leave open the task end-product. (2) Divergent tasks contain points of convergence for which objectives can be prespecified. (3) Convergent objectives need not be achieved only through convergent tasks. (4) Specifying outcomes of instruction as measurables is not the same as making objectives and measurements isomorphic. (5) Evaluation of individual student achievement is short-circuited by closed-end objectives. (6) Open-end objectives structure the learning situation more nearly like the way human interaction occurs in natural life settings. (Author)

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CAN BEHAVIORAL OBJECTIVES BE OPEN-ENDED?

by Gordon D. Lawrence

(Presented to AERA 1971 Annual Meeting, Session B20)

The recent AERA monograph, Instructional Objectives*, nicely characterizes two distinct viewpoints about objectives. In one chapter Popham represents the approach of reducing all instructional objectives to statements of student terminal behaviors. Popham would have all desired behaviors specified prior to instruction. In another essay of that monograph Eisner argues a contrasting view: that prespecified objectives can play only a narrow role. They are limited to the task of "helping children to become skilled in the use of cultural tools already available;" such objectives leave no room for expressive outcomes, for diverse personalized products which "modify and expand these /cultural/ tools so that the culture remains viable." Eisner proposes the term expressive objectives to characterize those objectives which have outcomes that cannot be specified in advance. The expressive objective describes an encounter which students are expected to have in a given setting, and it does not try to identify specific student outcomes.

A dichotomy seems to have been produced: either we have objectives with prespecified behavioral outcomes or open-end objectives with no specific outcomes attached. This apparent dichotomy sets the theme for this paper: Are behavioral specification and open-endedness incompatible? In brief I develop the argument that the dichotomy is unnecessary and that it can be replaced by a more productive point of view, one which combines the essential features of both positions. The argument consists of six propositions.

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* W. James Popham, Eliot Eisner, Howard Sullivan and Louise Tyler. Instructional Objectives, Rand McNally, 1969.

1. Behavioral objectives need not deal only with student end-products; they also can be focused on the by-products or processes of a student's instructional task and thus leave open the task end-product.

The value of stating objectives as behavior outcomes has been clearly established. But I see no fundamental reason why outcomes need to be terminal products of an instructional task. The by-products which a student generates or the procedures which he develops in pursuing his task can be the significant instructional outcomes from the teacher's point of view. The end-product of the task can remain open to whatever the student's imagination and enterprise can make of it. This approach can be shown, for example, in the situation of a teacher who wants to sponsor student independent study which is open-ended yet with some accountability features built into it. The student expresses an interest in exploring a subject; the teacher serves as a resource person, encouraging the student to design and pursue his own objectives. Some process objectives can be prespecified in measurable terms in such categories as: (a) student initiative in identifying and defining a manageable topic of study, (b) the quality of questions asked of the teacher, (c) the presence of a rationale for the study, (d) a set of criteria and procedures which match the rationale, (e) efficient use of time, and (f) careful self-evaluation by the student. I repeat -- these are categories of behavior which can be prespecified and can be measured while the student terminal product remains open-ended.

Popham and Baker* use the term "enroute behaviors", but this is not the same concept as open-end process behaviors just described. Enroute behaviors require a predetermined terminal product or terminal behavior of which they

* W. James Popham and Eva L. Baker. Systematic Instruction, Prentice-Hall, 1970.

are logical components or sub-objectives. Process or by-product objectives do not depend upon prespecified terminal products.

2. Even in highly individualistic and divergent instructional tasks, there must be points of convergence or else the divergence has no meaning in the culture context. At those points of convergence prespecification of objectives is possible and desirable.

When a student engages in divergent activity, say writing a poem, this behavior has the potential of expanding his own world-view, his conception of his own culture context. However, one condition of this expansion is that he must stay in touch with the realities of his situation. This "keeping in touch" is a convergent behavior, a communication check to assure that his imaginative activity maintains some common meaning or relevance to his social context. In effect, he is asking whether his divergent product will say to others what he intends it to say. This convergent process can be a prespecified objective even though the student's product cannot be.

3. Convergent objectives need not necessarily be achieved through convergent or parallel tasks.

Accurate use of standard symbols, such as those represented in the three Rs, is one class of behavior to which the term convergent objectives would apply. The literature dealing with behavioral objectives is saturated with the assumption that convergent outcomes of instruction, such as accurate spelling, are best achieved through convergent and/or memory tasks specified by the teacher. This assumption is contradicted by the many situations where convergent skills such as spelling and computation have been successfully learned as by-products of a divergent, open-end task which students undertook;

for example, young children operating a store -- making labels, writing invoices and counting money.

The last three propositions are criticisms of instruction systems or curricula which are built entirely around closed-end objectives.

4. Specifying outcomes of instruction as measurables is not the same as making objectives and measurements isomorphic.

I detect in the literature a tendency towards defining curriculum as a set of behavioral objectives. Proponents of this view are saying, in effect, that measurement of student terminal behavior can be made isomorphic with any objectives stated in behavioral terms. If we follow this reasoning, we are lead to the conclusion that the curriculum is mirrored in a set of measurements of student terminal behavior. Operating in that frame of reference, one is inclined to teach only for what shows up in the measurement instruments used, and I regard that as a serious mistake. It is neither desirable nor pragmatically possible to measure everything that is measurable. An overdose of measurement can be toxic to educational experiences. Measurements are never more than samplings of a vast quantity of behaviors. To specify one's objectives in measurable terms is a useful process; but to teach just for what shows up on measurement devices is to put much too much reliance on the particular measurement instruments.

5. Evaluation of individual student achievement is short-circuited by closed-end objectives.

Let me first distinguish between evaluation as a static and evaluation as a dynamic. Static evaluation of student behavior is a process of sampling, of extracting and abstracting, a piece of that behavior and then making judgments

about it. Closed-end objectives specify sampling of student end products. Open-end objectives provide the option of sampling the process and by-products of student tasks. Criteria for both kinds of static evaluation can be prespecified.

Evaluation as dynamic is the dialogue one has with himself or with another person -- "Is this adequate. . . How can I (we) change it to make it work better?" This is the flow of the assessment process. And here is an essential weakness of instruction systems based on closed-end objectives: they discourage this kind of evaluation dialogue. When adequate terminal behavior is already defined, already built into a prespecified objective, there is no encouragement for questions like, "Is this adequate. . .Did I set a realistic target for myself. . . .Should I settle for this or try it again in a different way?" The student misses the chance to ask these questions because the system preempts the questioning with automatic, predetermined answers of what is adequate. Open-end objectives, on the other hand, require such questioning by their nature. Moreover, they encourage the teacher to engage in this evaluation dialogue with the student. The dialogue is one means by which the teacher gathers evidence that objectives are being attained. My argument, in brief, is that open-end objectives not only incorporate pre-specification -- the static, status, statistical evaluation --, but they also encourage the personal and exploratory evaluation dialogue.

6. Open-end objectives structure the learning situation more nearly like the way human interaction occurs in natural life settings.

Problems and tasks encountered outside the classroom are usually much less cut and dried and prespecified than those inside. To have one's behavior directed by goals set up entirely by someone else is common to the classroom but not so common elsewhere. Closed-end objectives perhaps improve classroom life by making this other-directedness less mysterious and arbitrary, but they do not bring students into the process of defining and refining goals. Open-end objectives make <u>effective process</u> the general goal, and student task goals <u>emerge</u> rather than exist prior to instruction.

Surely, you have experienced this as I have. In dialogue with my associates I often find my aims changing, my ideas improved upon -- yet I am corrected without feeling put down. I grow on the basis of insights generated in that situation -- insights which could not really have been planned for ahead of time. And I have that sure experience of being extended beyond myself, of producing ideas which are mine and yet at the same time are greater than what I was able to produce prior to that dialogue. Clearly, an input-output model, with specified objectives at one end and evaluation at the other, does not adequately represent such experiences.

Dialogue, genuine dialogue with give and take, is a better model or simile. As the dialogue flows, its general aim may remain constant but its particular turns and thrusts cannot be known ahead of time, each new turn being shaped by elements immediately preceding. And if our instructional objectives are aimed at effective process, effective dialogue, then we can prespecify process criteria while leaving open the flow of new, emergent task objectives. Our challenge is to find ways of engaging students of all ages as full participants in real dialogue.